

CLAIMS

1. A method for treating a localized portion of body tissue comprising:
- (a) inserting a needle apparatus in a body, said apparatus including at least one hollow core needle for delivering a treatment substance into said body;
 - (b) guiding said needle apparatus to a target tissue in need of treatment, and said guiding including use of an imaging technique for viewing inside an area of tissue; and
 - (c) applying said treatment substance to said target tissue through said needle apparatus;
- wherein said treatment substance includes a component selected from the group consisting of tissue necrosis agents, genes, viruses, proteins, inhibitors, tissue markers, bioabsorbable polymers and other biological agents and chemotherapeutic agents.
2. A method as recited in claim 1 wherein said method is for causing selective tissue necrosis.
3. A method as recited in claim 1 wherein said treatment substance is in the form of a gel.
4. A method as recited in claim 1 wherein said treatment substance is in the form of microspheres.
5. A method for treating a localized portion of body tissue comprising:
- (a) inserting a needle apparatus in a body, said apparatus including at least one hollow core needle for delivering a treatment substance into said body;
 - (b) guiding said needle apparatus to a target tissue in need of treatment; and

1 (c) applying said treatment substance to said target tissue through said needle
2 apparatus;

3 wherein said treatment substance includes a plurality of microspheres
4 including a component selected from the group consisting of tissue necrosing
5 agents, genes, viruses, proteins, inhibitors, tissue markers, bioabsorbable
6 polymers and other biological agents and chemotherapeutic agents.

1 6. A method as recited in claim 5 wherein said method is for causing selective tissue
2 necrosis.

1 7. A method for treating a localized portion of body tissue comprising:

2 (a) inserting a needle apparatus in a body, said apparatus including at least
3 one hollow core needle for delivering a treatment gel into said body;

4 (b) guiding said needle apparatus to a target tissue in need of treatment; and

5 (c) applying said treatment gel to said target tissue through said needle
6 apparatus;

7 wherein said treatment gel includes at least one component selected from
8 the group consisting of tissue necrosing agents, genes, viruses, proteins,
9 inhibitors, tissue markers, bioabsorbable polymers and other biological agents and
10 chemotherapeutic agents.

1 8. A method as recited in claim 7 wherein said method is for causing selective tissue
2 necrosis.

1 9. A method as recited in claim 1 further comprising applying RF energy to said
2 target tissue through an RF electrode.

1 10. A method as recited in claim 9 wherein said substance includes an electrically
2 conductive component.

1 11. A method as recited in claim 5 further comprising applying RF energy to said
2 target tissue through an RF electrode.

1 12. A method as recited in claim 11 wherein said microspheres include an electrically
2 conductive agent.

1 13. A method as recited in claim 7 further comprising applying RF energy to said
2 target tissue through an RF electrode.

1 14. A method as recited in claim 13 wherein said gel includes an electrically
2 conductive agent.

1 15. A method as recited in claim 1 wherein said substance includes an image
2 contrasting agent.

1 16. A method as recited in claim 5 wherein said guiding includes use of an imaging
2 technique.

1 17. A method as recited in claim 16 wherein said microspheres include an image
2 contrasting agent.

1 18. A method as recited in claim 7 wherein said guiding includes use of an imaging
2 technique.

1 19. A method as recited in claim 18 wherein said gel includes an image contrasting
2 agent.

1 20. A method as recited in claim 16 wherein each said microsphere includes a
2 container holding therein a gas and a substance selected from the group consisting of a gel and a
3 liquid for providing image enhancement when said imaging technique is ultrasound.

1 21. A method as recited in claim 1 wherein said target tissue is in a prostate, and
2 wherein said method is for treating a condition selected from the group consisting of BPH and
3 prostate cancer, and wherein said inserting is accomplished by a method selected from the group
4 consisting of Transrectal, Transurethral and Transperineal approach.

1 22. A method as recited in claim 5 wherein said target tissue is in a prostate, and
2 wherein said method is for treating a condition selected from the group consisting of BPH and
3 prostate cancer, and wherein said inserting is accomplished by a method selected from the group
4 consisting of Transrectal, Transurethral and Transperineal approach.

1 23. A method as recited in claim 7 wherein said target tissue is in a prostate, and
2 wherein said method is for treating a condition selected from the group consisting of BPH and
3 prostate cancer, and wherein said inserting is accomplished by a method selected from the group
4 consisting of Transrectal, Transurethral and Transperineal approach.

1 24. A method as recited in claim 1 wherein said method is applied for the treatment of
2 a body part selected from group consisting of prostate, liver, uterus, bladder, kidney, lung, and
3 breast.

1 25. A method as recited in claim 24 wherein said inserting is accomplished using an
2 approach selected from the group consisting of percutaneous, laparoscopic, and endoscopic.

1 26. A method as recited in claim 5 wherein said method is applied for the treatment of
2 a body part selected from group consisting of prostate, liver, uterus, bladder, kidney, lung, and
3 breast.

1 27. A method as recited in claim 26 wherein said inserting is accomplished using an
2 approach selected from the group consisting of percutaneous, laparoscopic, and endoscopic.

1 28. A method as recited in claim 7 wherein said method is applied for the treatment of
2 a body part selected from group consisting of prostate, liver, uterus, bladder, kidney, lung, and
3 breast.

1 29. A method as recited in claim 28 wherein said inserting is accomplished using an
2 approach selected from the group consisting of percutaneous, laparoscopic, and endoscopic.

03 1 30. A method as recited in claim 1 wherein said guiding is further performed using a
2 device selected from the group consisting of biopsy apparatus, laparoscope, endoscope,
3 hysteroscope, MRI, CT scan, and ultrasound imaging apparatus.

1 31. A method as recited in claim 5 wherein said guiding is performed using a device
2 selected from the group consisting of biopsy apparatus, laparoscope, endoscope, hysteroscope,
3 MRI, CT scan, and ultrasound imaging apparatus.

1 32. A method as recited in claim 7 wherein said guiding is performed using a device
2 selected from the group consisting of biopsy apparatus, laparoscope, endoscope, hysteroscope,
3 MRI, CT scan, and ultrasound imaging apparatus.

1 33. A method as recited in claim 1 wherein said inserting is performed by at least one
2 method selected from the group consisting of percutaneous, through an incision, and through a
3 natural body opening, and a laparoscopic approach.

1 34. A method as recited in claim 5 wherein said inserting is performed by at least one
2 method selected from the group consisting of percutaneous, through an incision, and through a
3 natural body opening.

1 35. A method as recited in claim 7 wherein said inserting is performed by at least one
2 method selected from the group consisting of percutaneous, through an incision, and through a
3 natural body opening, and a laparoscopic approach.

1 36. A method as recited in claim 4 wherein said microspheres further include a chemo
2 agent selected from the group consisting of hypertonic saline solution, ethanol, acetic acid, and
3 other necrosing agents.

1 37. A method as recited in claim 7 wherein said gel further includes a chemo agent
2 selected from the group consisting of hypertonic saline solution, acetic acid, ethanol and other
3 tissue necrosing agents, and wherein said gel further includes a binding agent.

1 38. A method as recited in claim 5 wherein each said microsphere further includes a
2 gas.

1 39. A method as recited in claim 38 wherein said gas is selected from the group
2 consisting of air, helium, fluorocarbon, and carbon dioxide.

1 40. A method as recited in claim 37 wherein said binding agent is selected from the
2 group consisting of biomaterial, polymer, biodegradable polymer, a suspension agent, a
3 derivative of a protein, fat, collagen, and oil.

1 41. A method as recited in claim 1 wherein said conductive substance is selected from
2 the group consisting of conductive polymers, conductive agents, conductive elements, carbon
3 particles, and metallic suspensions.